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ABSTRACT

The popular conception of illegal drug use as inevitably pushing users toward compulsive drug abuse, and the ideological stance that drug use is a moral weakness, are offered by many as justification for punitive drug control. Challenging this view are the research on "set and setting" as determinants of the consequences of drug use, and the harm reduction movement that aims to ameliorate the potentially negative impact of drug use. One implication of these alternative approaches is that adults may be at increased risk for developing harmful patterns of drug use if their conceptualizations of the nature of illegal drug use exclude the possibility of controlled use as one possible pattern. The present study was designed to address these possibilities by investigating the relationship between how adults think about illegal drug use and their patterns of drug use. The hypotheses tested were that adults who possess a dichotomous conceptualization of the nature of illegal drug use and those who express less acceptance for using guidelines for drug use are at increased risk of developing harmful patterns of drug use. Results and recommendations for future research are discussed. Appended are tables with study's results. (JDM)

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by

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Patterns of Drug Use: The Role of Dichotomous Conceptualizations

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The popular conception of illegal drug use as inevitably pushing users toward compulsive drug abuse, and the ideological stance that drug use is a moral weakness, are offered by many as justification for punitive drug control—the war on drugs that has filled prisons beyond their capacity and taken resources away from prevention and treatment (Baum, 1996; Charvat, 1998; MacCoun, 2000). Challenging this view are the research on *set and setting* as determinants of the consequences of drug use (Grund, Kaplan, & De Vries, 1993; Zinberg, 1984) and the harm reduction movement that aims to ameliorate the potentially negative impact of drug use (Marlatt, 1998; MacCoun, 2000). Rather than a simple relationship between pattern of drug use and harm, these approaches suggest complex relationships between patterns of drug use, the degree of harm experienced by the user and others, the circumstances under which the drug use occurs, and how users think about their drug use. In fact, there is ample evidence that the expectations, attitudes, and personality of the user at the time of the drug use (the *set*) influence the nature of the drug experience and the pattern of drug use adopted (Beck & Rosenbaum, 1994; Schafer & Brown, 1991).

One implication of these alternative approaches is that adults may be at increased risk for developing harmful patterns of drug use if their conceptualizations of the nature of illegal drug use exclude the possibility of controlled use as one possible pattern; that is, if they embrace a dichotomous conceptualization of the nature of illegal drug use such that they view abstinence or compulsive abuse as the only possibilities related to involvement with illegal drugs. Failure to acknowledge other possibilities may place uses at increased risk for harm by limiting their awareness of guidelines for drug use that have the potential to minimize harm.

The present study was designed to address these possibilities by investigating the relationship between how adults' think about illegal drug use and their patterns of drug use. The hypotheses tested were that adults who possess a dichotomous conceptualization of the nature of

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* This research was conducted at the University of Missouri-Kansas City; the author is currently a senior program associate at the American Association for the Advancement of Science. The opinions, conclusions, and recommendations expressed herein are those of the author and do not necessarily reflect the views of the American Association for the Advancement of Science. ©2001 Jeffrey L. Charvat. All Rights Reserved.

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illegal drug use and those who express less acceptance for using guidelines for drug use are at increased risk of developing harmful patterns of drug use. Specifically, controlled drug users were predicted to have less dichotomous conceptualizations of the nature of illegal drug use than either compulsive drug users or participants who were abstinent, and they were predicted to express greater rates of endorsement of guidelines for drug use than either compulsive drug users or those who were abstinent. These hypotheses were tested by comparing groups formed based on participants' frequency of drug use.

Method

Two hundred and eight randomly selected students from a large, urban, Midwestern university participated by completing an anonymous mail survey (42 percent of those contacted). Three categories of data were collected: (1) frequency of drug use for 13 drugs or categories of drugs; (2) the level of dichotomy of conceptualizations of the nature of illegal drug use; and (3) willingness to endorse guidelines for illegal drug use that may serve to protect users from harm. Hypotheses were tested by comparing groups formed based on participants' frequency of drug use (e.g., daily, weekly, etc.) over the past year. Four patterns of drug use were differentiated: *abstinent*, *controlled*, *compulsive*, and *other*. The level of dichotomy of conceptualizations of the nature of illegal drug use was measured using the composite score from two survey items: "When it comes to the use of illegal drugs, abstinence or compulsive drug abuse are the only realistic possibilities" and "Some people take illegal drugs and do not experience significant problems as a result." Guidelines for drug use included items such as "Do not use alone" and "Do not use with strangers." As an alternative to endorsement of these guidelines, respondents were offered the choice of recommending that one "just say no to drugs."

Results

Patterns of Drug Use

The participants' patterns of drug use were defined based upon their self-reported frequency of drug use for 12 drugs or categories of drugs (the 13th drug, caffeine, was not used in the classification of participants). The abstinent group was composed of participants who reported never having used any drug listed in the survey. Controlled and compulsive users were classified based on a simplified version of the categorization system used by Zinberg (1984) in

his study of controlled heroin users (i.e., simplified because less detailed information was available for this sample compared to that used in Zinberg's study). The minimum criterion for classification as a controlled user was a participant's self-reported use of at least one drug at any time in the past year. Participants were classified as compulsive drug users if they reported the daily, more than once daily, or binge use of any drug, or if they reported polydrug use that amounted to at least daily use of drugs in general. For example, reporting the use of three drugs, each twice a week, would constitute compulsive drug use. Participants were classified as *other* if they did not report the compulsive use of any drug and reported having quit the use of any drug or if they reported the controlled use of any drug but also reported having quit using any drug. Uncertainty about whether former drug use was controlled or compulsive necessitated this approach and the exclusion of this group from further analysis. Appendix A presents information on students' frequency of drug use in the past year; Appendix B presents the percentage of students reporting any drug use ever by type of drug and age group; and Appendix C presents the basis for participants' classification by their pattern of drug use.

Comparisons by Pattern of Drug Use

The hypotheses predicted that controlled users would exhibit less dichotomous conceptualizations and greater endorsement of guidelines for drug use than compulsive users or those who were abstinent. However, analyses revealed a strong positive relationship between more frequent drug use and lower levels of dichotomous thinking and between more frequent drug use and a greater likelihood of recommending guidelines to reduce the potential for harm from drug use. Compulsive drug users moderately disagreed, controlled drug users tended to slightly disagree, and participants who were abstinent tended to very slightly agree with a dichotomous conceptualization of drug use. A one-way analysis of variance on level of dichotomous conceptualization of the nature of illegal drug use revealed a highly significant main effect for pattern of drug use, $F(2, 135) = 9.57$, $p < .001$. Least significant difference multiple comparison tests revealed a highly significant difference between the compulsive group and the abstinent group ($p < .001$) and between the compulsive group and the controlled group ($p < .01$) on level of dichotomous conceptualization. Participants classified as abstinent did not significantly differ from those classified as controlled drug users. These results are presented in Table 1.

A series of chi-square tests was employed to investigate the relationship between participants' patterns of drug use and their willingness to recommend guidelines for illegal drug use. Generally, chi-square analyses demonstrated that participants' patterns of drug use and their relative tendency to recommend guidelines for illegal drug use are related to each other. With the exception of three guidelines, all chi-square analyses were at least significant at the .05 probability level. The tendency to recommend guidelines for illegal drug use was greater among compulsive users compared to controlled users and compared to participants who were abstinent. The tendency to recommend guidelines was also greater among controlled users compared to participants who were abstinent. Table 2 presents these results.

Table 1

Level of Dichotomous Conceptualization of the Nature of Illegal Drug Use by Pattern of Drug Use

	Level of Dichotomous Conceptualization of the Nature of Illegal Drug Use		
Pattern of Drug Use	Number	Mean	SD
Abstinent	19	$.34_a$	2.13
Controlled	73	$-.60_s$	2.12
Compulsive	46	-1.87_{bt}	1.85
Sample	138	-.89	2.16

Note. Ratings were made on a 9-point scale (-4 = *very strongly disagree*, 0 = *neutral*, +4 = *very strongly agree*). Means with different a and b subscripts differ at $p < .001$ using the least significant difference test. Means with different s and t subscripts differ at $p < .01$ using the least significant difference test.

Table 2

Endorsement of Guidelines By Drug Use Pattern

Guideline	X^2	p	Percent Endorsing Guideline by Pattern of Drug Use		
			Compulsive	Controlled	Abstinent
Use guidelines (as opposed to recommending that one "just say no to drugs.")	7.93	.019	55%	38%	20%
Do not use in a strange place.	7.81	.020	36%	18%	10%
Do not use with strangers.	9.10	.011	40%	20%	10%
Plan in advance for use.	4.78	.091	30%	14%	20%
Do not use alone.	7.81	.020	36%	18%	10%
Know the person well who supplies the drug.	9.10	.011	40%	20%	10%
Budget money for drug use.	5.36	.069	23%	11%	5%
Take care of responsibilities first (childcare, work, etc.).	8.24	.016	47%	27%	15%
Just do what feels right.	3.32	.190	6%	1%	0%
Reflect upon your state of mind before drug use.	12.36	.002	43%	18%	10%

Note. Df = 2; N = 141 (abstinent, n = 20; controlled, n =74; compulsive, n = 47).

Discussion

Although the results did not support the hypotheses, they did reveal interesting relationships between patterns of drug use and dichotomous conceptualizations of the nature of illegal drug use and between patterns of drug use and willingness to endorse guidelines for illegal drug use. Analyses indicated a strong positive relationship between more frequent drug

use and lower levels of dichotomous conceptualizations and between more frequent drug use and greater likelihood of recommending guidelines to reduce the potential for harm from drug use. It is tempting to simply conclude that less dichotomous conceptualizations and endorsement of guidelines for illegal drug use do not protect users from developing harmful patterns of drug use (otherwise, these participants' drug use patterns might have been expected to have stabilized at controlled levels). However, an equally likely possibility is that less dichotomous conceptualizations and endorsement of guidelines for illegal drug use do not prevent harm to users by preventing increases in their frequency of drug use but, instead, protect users from harm from their drug use *in spite of* their greater frequency of drug use. In addition, it is possible that the attitudes of those who are abstinent or whose drug use is controlled may, conceivably, place them at greater risk for harm if the former group's resistance skills were to fail and they were to become involved in drug use, or if the latter group succumbed to influences to increase their use of drugs.

This suggests the need to tailor preventive messages about drug abuse to specific populations based on an assessment of their conceptualizations of the nature of illegal drug use—rather than monolithically based upon a punitive or moralistic stance. A strict approach to drug control may help reduce the probability of harm from drug use among those who view illegal drug use as a dichotomy between abstinence and compulsive drug abuse by reinforcing their resistance skills toward drug involvement. But it may place those with weaker resistance skills at greater risk for harm from drug use by failing to alert them to conditions that increase the likelihood of negative consequences from drug use. Approaches that acknowledge the high prevalence of drug use in our society and which focus on harm reduction may provide protection from the potentially harmful consequences of drug use for those who are unlikely to maintain abstinence despite stringent drug control efforts.

Some limitations of this research should be noted. First, controlled drug use was broadly defined (e.g., using a drug once in the past year), whereas a stronger test of the hypothesis would have included controlled users who exhibited greater frequencies of drug use (e.g., twice a month, once a week, etc.). Second, most controlled drug users were defined as such by virtue of their frequency of alcohol use, and most compulsive drug users were defined as such by virtue of their frequency of tobacco use. A stronger test of the hypotheses would result from inclusion of compulsive and controlled users of drugs other than alcohol and tobacco. While reported illegal

drug use in this study was comparable to national rates, the high number of participants who reported having quit the use of at least one drug made it impossible to determine their pattern of drug use and necessitated their elimination from the study. Third, frequency of drug use was used as the sole measure of pattern of drug use. While this may be valid at the extremes (e.g., daily use of several drugs, abstinence), that one can distinguish between controlled and compulsive use of a drug (i.e., between use and abuse) based solely on frequency of use is likely a poor assumption. Future research in this area should avoid the temptation to assume that greater frequency of drug use necessarily implies greater harm to the user and should, instead, include independent measures of the actual harm experienced by users.

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Appendix A

Students' Self-Reported Drug Use in Past Year (N = 208)

	Frequency of Drug Use							
Drug	Never used	Quit[a]	Less than 1X month	1-3X month	2X a week	1X day	More than 1X day	Binge only
Alcohol	27	15	47	67	36	6	1	8
Tobacco	130	33	4	7	1	13	17	2
Marijuana or Hashish	130	52	10	7	1	4	1	3
Cocaine	182	25	0	0	0	0	0	1
Crack	200	8	0	0	0	0	0	0
Opiates	199	8	0	0	0	1	0	0
Hallucinogens	172	27	7	1	0	0	0	1
PCP	205	3	0	0	0	0	0	0
Amphetamines	179	28	0	1	0	0	0	0
Barbiturates	198	9	2	0	0	0	0	0
Inhalants	201	5	1	0	0	0	0	0
Prescription Drugs[b]	187	13	6	2	0	0	0	0
Caffeine	21	5	6	16	25	78	54	1

Note. Totals may not equal 208 because not all respondents reported frequencies for every drug.

[a]Not limited to the past year. [b]For nonmedical reasons.

Appendix B

Percentage of Students Ever Reporting Drug Use

Compared to National-Estimates

	Study Sample (by Age Group)			National Sample (of College Students)
Drug	18-25	26-34	35+	1-4 Yrs Past High School
Alcohol	80.3	92.3	88.1	83.6
Marijuana or Hashish	38.2	44.6	29.9	35.2
Cocaine[a]	5.3	16.9	14.9	5.4
Opiates	2.6	6.2	4.5	4.5
Hallucinogens[b]	17.1	26.2	13.4	13.2
Amphetamines	9.2	16.9	16.4	6.3
Barbiturates	0.0	7.7	7.5	3.2
Inhalants	6.6	1.5	0.0	3.2
Prescription Drugs[c]	6.6	13.8	10.7	Not Available

Note. [a]Includes crack. [b]Includes PCP. [c]For nonmedical uses. N = 208 (18-25, n = 76; 26-34, n = 65; 35 and over, n = 67). National estimates of drug use are from the *Sourcebook of Criminal Justice Statistics (Online)* (Pastore & Maquire, 2000).

Appendix C

Basis for Classification of Participants by Pattern of Drug Use

Type of Drug Use	Pattern of Drug Use		
	Controlled (n = 74)	Compulsive (n = 47)	Other (n = 65)
Alcohol	60	9	6
Tobacco	0	25	13
Alcohol and tobacco	3	4	2
Polydrug (illegal)	1	0	14
Polydrug (illegal and legal drugs)	8	6	18
Marijuana/Hashish	1	3	11
LSD	0	0	1
Prescription	1	0	0

Note. Participants are listed as other if they quit using at least one drug, but they may or may not still be using others at controlled levels. Participants listed as compulsive may have quit using other drugs or may be using other drugs at controlled levels. Participants who were abstinent (n = 20) are not shown.